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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/777,299	02/12/2004	Paul E. Share	13015/39281	5310

62127 7590 02/25/2008

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EXAMINER	
DANIELS, MATTHEW J	
ART UNIT	PAPER NUMBER
1791	
MAIL DATE	DELIVERY MODE
02/25/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/777,299	SHARE ET AL.	
	Examiner	Art Unit	
	MATTHEW J. DANIELS	1791	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *17 September 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-3,5-21 and 25-32* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☐ Claim(s) _____ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. Rejections set forth previously under this section are withdrawn in view of the amendment to Claim 20 and the arguments at pages 8 and 9 of the 17 September 2007 reply.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. **Claims 1-4, 6-15, 17-21, 25-32** are rejected under 35 U.S.C. 103(a) as obvious over Collette (5759653).

As to Claim 1, Collette teach a method comprising the steps of: (a) forming a preblend/masterbatch (col 5 lines 6-7) comprising: a diluent polyester (col 5 line 17), a polyamide material (col 5 line 18), and an oxygen scavenging material (col 5 line 19); providing a base/core layer polyester (col 5 line 31); introducing the preblend and the base polyester into a molding apparatus to permit melting and admixing of the preblend and the base polyester (col 5 lines 29-65); injection molding or extruding the admixture in the apparatus to provide a preform (fig 3, **59**); and expanding the preform to provide a plastic container having a barrier layer formed from the admixture of the preblend and polyester (fig 6 & 7), wherein the plastic container and barrier layer has oxygen scavenging property that is activated after filling the container with an aqueous fluid (7:24-33, 7:59-63, 8:46-51). Collette also teaches forming

bottles with catalysts that are activated by heat (7:32) and hot fill applications (7:61), which would therefore activate the catalyst during filling. If it is ultimately determined that Collette activates before filling, this limitation is drawn merely to a rearrangement of process steps disclosed by the prior art, and in view of Collete's teaching of methods in which the catalysts are activated, one would have found it obvious to rearrange the order of filling and activation.

Collette do not explicitly teach that the container is "stable during unfilled storage". However, in this regard, Collette suggests that catalysts are activated by oxygen (7:30), heat (7:32), or moisture (7:2-6), and that the stability (shelf life) of the bottles may be improved by refrigeration, desiccation, or storing in a modified atmosphere environment (7:24-28). Thus, although Collette is silent to the stability, Collette teaches storage conditions which would improve the stability of the bottle.

As to Claim 2, Collette teach that the plastic container is a multilayer plastic container (fig 7).

As to Claim 3, Collette suggest that monolayer plastic containers are known and conventional in the prior art (col 1 lines 47-51).

As to Claim 5, Collette teaches the same preblending process, and (see the rejection of Claim 1 above), and thus the preblend would implicitly exhibit the claimed characteristics despite that Collette is silent to comparing the preblend with the claimed hypothetical mixture.

As to Claim 6, Collette et al teach that the preblend is in a form of solid particles (col 5 line 26).

As to Claim 7, Collette et al teach that the diluent polyester is present in the preblend in an amount of about 25% to about 75%, by weight of the preblend (col 16 line 3-7).

As to Claim 8, Collette et al teach that the diluent polyester comprises polyethylene terephthalate and polyethylene naphthalate (col 14 line 22-27).

As to Claim 9, Collette teaches that the base polyester contains a substantial portion virgin PET, which would implicitly be bottle grade (16:12-14). It is noted that Claim 19 of Collette is drawn to "on the order of 50% post consumer PET" (15:15-20). However, the Examiner's position will be that the additional post consumer PET does not materially affect the basic and novel characteristics of the claimed invention because it provides PET material which would have the same or substantially the same structure as the virgin material.

As to Claim 10, Collette et al teach that the polyamide material is present in the preblend in an amount of about 25% to about 75%, by weight of the preblend (col 15 line 7-11).

As to Claim 11, Collette et al teach that the polyamide material comprises a polymer containing m-xylylenediamine monomer units (col 10 line 51).

As to Claim 12, Collette et al teach that the polyamide material comprises a polymerization product of m-xylyenediamine and adipic acid (col 10 lines 51-52).

As to Claims 13-15, Collette et al teach an oxygen scavenging material present in the preblend in an amount of about 50 to about 1000 parts per million, by weight and comprises cobalt or a metal complex thereof (col 10 lines 24-37).

As to Claim 17, Collette et al teach that the base polyester is in a form of solid particles (col 5 lines 59-67).

As to Claim 18, Collette et al teach that the preblend and the base polyester are admixed in an amount of about 0.5% to about 20%, by weight, of the preblend, and about 80% to about 99.5%, by weight, of the base polyester (col 16 lines 8-11).

As to Claim 19, Collette et al teach that the base polyester is polyethylene terephthalate (col 5 line 31).

As to Claim 20, Collette et al teach that the polyethylene terephthalate comprises a virgin bottle grade polyethylene terephthalate, a post consumer grade polyethylene terephthalate, or a mixture thereof (col 5 lines 11-32).

As to Claim 21, Collette et al teach that the preform contains about 10 to about 80 ppm, by weight, of the oxygen scavenging material (col 1 line 53).

As to Claim 25, Collette teaches that the containers are maintained in refrigeration or desiccation (7:25-28), and hot filling (7:61) or filling with water (8:46-51), which would inherently activate the oxygen scavenging property for those catalysts which activate at room temperature (7:29-30). Alternatively, this aspect of the invention is drawn to a rearrangement of process steps disclosed in the prior art, which is generally deemed to be prima facie obvious. In view of Collette's teaching that the scavengers are activated by heat and moisture (), it would have been obvious to activate the scavengers with a hot product (7:61) containing moisture ()

As to Claim 26, Collette's teaching of the claimed process steps and ingredients, when used to form a package, would implicitly meet the claimed result.

As to Claim 27, Collette teach a method comprising the steps of: (a) forming a preblend/masterbatch (col 5 lines 6-7) comprising: a diluent polyester (col 5 line 17), a polyamide material (col 5 line 18), and an oxygen scavenging material (col 5 line 19); providing a virgin grade polyester (col 16, lines 12-14); introducing the preblend and the polyester into a molding apparatus to permit melting and admixing of the preblend and the base polyester (col 5 lines 29-65); injection molding or extruding the admixture in the apparatus to provide a preform

(fig 3, **59**); and expanding the preform to provide a plastic container having a barrier layer formed from the admixture of the preblend and polyester (fig 6 & 7), wherein the plastic container and barrier layer has oxygen scavenging property that is activated after filling the container with an aqueous fluid (7:24-33, 7:59-63, 8:46-51). Collette also teaches forming bottles with catalysts that are activated by heat (7:32) and hot fill applications (7:61), which would therefore activate the catalyst during filling.

Collette does not explicitly teach (a) the admixture consists essentially of the preblend and virgin bottle grade polyester, or (b) the permeability change achieved by the filling with water. However, these aspects of the invention would have been prima facie obvious for the following reasons:

(a) The admixture of Collette contains virgin PET (See Claim 28), but also contains post consumer PET. However, because the material is the same or substantially the same as the remainder of the preblend material, it would not materially affect the basic and novel characteristics of the invention, and thus this transitional language would still read on the method of Collette.

(b) The claimed process steps and ingredients of Collette, when used to form a package according to Collette's teachings, would implicitly meet the claimed result.

As to Claim 28, Collette et al teach a transition metal oxygen scavenging material present in the preblend in an amount of about 50 to about 1000 parts per million (col. 10, lines 23-37), the polyamide material is present in the preblend in an amount of about 10-50% by weight of the preblend (col 15 line 7-11), and the polyester comprising PET used in a percentage of about 50-90% (col 15, lines 3-4).

As to Claim 29, Collette et al teach a transition metal oxygen scavenging material present in the preblend in an amount of about 50 to about 1000 parts per million (col. 10, lines 23-37), the polyamide material is present in the preblend in an amount of about 10-50% by weight of the preblend (col 15 line 7-11), and the polyester comprising PET used in a percentage of about 50-90% (col 15, lines 3-4).

As to Claim 30, the base polyester contains virgin polyethylene terephthalate (col 16, lines 12-14).

As to Claim 31, Collette teach a method comprising the steps of: (a) forming a preblend/masterbatch (col 5 lines 6-7) comprising: a diluent polyester (col 5 line 17), a polyamide material (col 5 line 18), and an oxygen scavenging material (col 5 line 19); providing a base grade polyester (col 15, lines 12-20, col 16, lines 12-14); introducing the preblend and the polyester into a molding apparatus to permit melting and admixing of the preblend and the base polyester (col 5 lines 29-65); injection molding or extruding the admixture in the apparatus to provide a preform (fig 3, **59**); and expanding the preform to provide a plastic container having a barrier layer formed from the admixture of the preblend and polyester (fig 6 & 7), wherein the plastic container and barrier layer has oxygen scavenging property that is activated after filling the container with an aqueous fluid (7:24-33, 7:59-63, 8:46-51). Collette also teaches forming bottles with catalysts that are activated by heat (7:32) and hot fill applications (7:61), which would therefore activate the catalyst during filling. Although Collette does not fabricate a monolayer preform, Collette acknowledges that such teachings are generally available in the prior art (col 1, lines 46-60), and it would have been prima facie obvious to provide a monlayer preform in order to provide a single screw extruder (as distinguished from Collette, Fig. 3).

As to Claim 32, Collette et al teach a transition metal oxygen scavenging material present in the preblend in an amount of about 50 to about 1000 parts per million (col. 10, lines 23-37), the polyamide material is present in the preblend in an amount of about 10-50% by weight of the preblend (col 15 line 7-11), and the polyester comprising PET used in a percentage of about 50-90% (col 15, lines 3-4).

3. **Claims 31 and 32** are rejected under 35 U.S.C. 103(a) as obvious over Nilsson (USPN 5034252) in view of Collette (5759653). **As to Claim 31**, Nilsson teaches mixing polyethylene terephthalate, polyamide, and an oxygen scavenging material (col 3, lines 29-50), making a monolayer preform by injection molding and expanding it to provide a plastic container (5:1-41). The article of Nilsson would have stability during storage (an aging process is required to cause activation), and would have an oxygen scavenging property activated when filled with aqueous fluid. Nilsson is silent to the preblend process of step (a) and mixing the preblend with the base polyester.

However, Collette teach a method comprising the steps of: (a) forming a preblend/masterbatch (col 5 lines 6-7) comprising: a diluent polyester (col 5 line 17), a polyamide material (col 5 line 18), and an oxygen scavenging material (col 5 line 19); providing a base grade polyester (col 15, lines 12-20, col 16, lines 12-14); introducing the preblend and the polyester into a molding apparatus to permit melting and admixing of the preblend and the base polyester (col 5 lines 29-65); injection molding or extruding the admixture in the apparatus to provide a preform (fig 3, **59**); and expanding the preform to provide a plastic container having a barrier layer formed from the admixture of the preblend and polyester (fig 6 & 7), wherein the

plastic container and barrier layer has oxygen scavenging property that is activated after filling the container with an aqueous fluid (7:24-33, 7:59-63, 8:46-51). Collette also teaches forming bottles with catalysts that are activated by heat (7:32) and hot fill applications (7:61), which would therefore activate the catalyst during filling. It would have been prima facie obvious to one of ordinary skill in the art at the time of the invention to incorporate the method of Collette into that of Nilsson in order to provide improved mixing of the constituent materials.

As to Claim 32, Collette et al teach a transition metal oxygen scavenging material present in the preblend in an amount of about 50 to about 1000 parts per million (col. 10, lines 23-37), the polyamide material is present in the preblend in an amount of about 10-50% by weight of the preblend (col 15 line 7-11), and the polyester comprising PET used in a percentage of about 50-90% (col 15, lines 3-4).

Response to Arguments

4. Applicant's arguments filed 17 September 2007 have been fully considered but they are not persuasive. The arguments appear to be on the following grounds:

a) Collette does not teach or suggest a method for forming a plastic container that is stable during unfilled storage and has a barrier layer with an oxygen scavenging property that is activated after filling the container with an aqueous fluid. "Collette presumably desires accelerated activation to avoid the costly aging process required to achieve activation for certain conventional oxygen barrier systems prior to filling, which are detailed by Collette in the Background Section" (Remarks, page 10, lines 7-9).

b) Applicant argues in a footnote that "the fact that it was activated before filling is undisputed." (page 10).

c) The Office Action argument mischaracterizes the teaching of Collette with respect to activation and ignores that the barrier layer of the Collette container is already activated before filling.

d) Applicants traverse the assertion that the claimed invention is prima facie obvious. In concluding that the claimed invention is merely a rearrangement of process steps of Collettte, the Office Action gives little weight to clause (f).

e) Dependent claims are believed to be patentable because of the limitation that the bottle is activated after filling.

5. These arguments are not persuasive for the following reasons:

a) If Applicants remarks assert that the aging process, which Collette describes as conventional in the prior art, is for the purpose of activating the catalyst, this would tend to support the conclusion that the claimed invention is merely a rearrangement of steps disclosed by the prior art. The fabrication of bottles containing unactivated catalyst would therefore be obvious, and in view of Collette's teaching that aging usually requires humidity (2:20-21), and further in view of Collette's teaching at 8:60-9:10, which shows that a high relative humidity is provided at the inner wall when a container is filled and that the water vapor permeates through the PET layer, it would have been obvious that the liquid could itself be used to activate the catalyst.

Therefore, the Examiner maintains the alternative positions that (a) Collette discloses activation after filling by the fill material in the portion of the reference at 8:46-9:10, or (b) that

the claimed invention is merely a rearrangement in the order of activation of the catalyst and that the ordinary artisan would have had all the necessary tools to perform this rearrangement.
b-d) The Examiner submits that no agreement has been reached with regard to the activation such that it is now undisputed, as asserted in the footnote on page 10 of Applicant's remarks.

It is noted, however, is that it is important to the instant invention that the preparation of the preblend eliminates contact between the polyamide material and the oxygen scavenging material prior to incorporation into the base polyester, which in turn eliminates premature activation of the oxygen scavenging complex. (Specification, page 32)

However, by providing the same or substantially the same preblend process where a diluent polyester, a polyamide, and a catalyst are mixed (Collette, col. 5), it is the Examiner's position that the method of Collette would provide the same degree of elimination of premature activation of the oxygen scavenging complex by also eliminating contact between the various constituents in substantially the same way.

Once a reference teaching a product appearing to be substantially identical is made the basis of a rejection, and the Examiner presents evidence or reasoning tending to show inherency, the burden shifts to the Applicant to show an unobvious difference. See MPEP 2111.04(IV). "[T]he PTO can require an applicant to prove that the prior art products do not necessarily or inherently possess the characteristics of his [or her] claimed product. Whether the rejection is based on inherency' under 35 U.S.C. 102, on prima facie obviousness' under 35 U.S.C. 103, jointly or alternatively, the burden of proof is the same...[footnote omitted]." The burden of proof is similar to that required with respect to product-by-process claims. *In re Fitzgerald*, 619 F.2d

67, 70, 205 USPQ 594, 596 (CCPA 1980) (quoting *In re Best*, 562 F.2d 1252, 1255, 195 USPQ 430, 433-34 (CCPA 1977)).

Applicants assert that it is unclear exactly how the Collette material was activated, but that it could have been (i) the incorporation of post-consumer PET, (ii) the addition of water to the masterbatch to a level of 2500 ppm, and/or (iii) use of high levels in the masterbatch, such as 3000-6500 ppm of the metal catalyst. However, with regard to (i), Collette clearly suggests that the post-consumer PET, which is not used in the masterbatch (Collette, 5:11-21), is dried to a level of 50 ppm moisture prior to mixing with the masterbatch, and would therefore not appear to cause any activation. Additionally, Collette's summary of the prior art in columns 1-2 and the knowledge generally available to those in the art suggests that it would have been obvious to use virgin PET instead. Regarding (ii), while the masterbatch "may" have a moisture content above 2500 ppm, Collette teaches that other cooling methods may be used when the catalyst is water-initiated (7:1-9), which would not provide the 2500 ppm moisture content or the resulting activation. Additionally, Collette's recognition of the effect of moisture content on the catalyst (7:1-9) suggests that one in the art would have found it obvious to exclude water. Regarding (iii), while high levels *may* be used, Collette provides that "One skilled in the art can determine without much difficulty which concentration is appropriate in each blend, but in general it will be a range of 50-10,000 ppm by weight, and more preferably 50-1,000 ppm." (10:32-36).

c) Dependent claims are rejected for the reasons set forth above.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MATTHEW J. DANIELS whose telephone number is (571)272-2450. The examiner can normally be reached on Monday - Friday, 8:00 am - 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christina Johnson can be reached on (571) 272-1176. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

MJD 2/5/08

/Christina Johnson/
Supervisory Patent Examiner, Art Unit 1791

Application Number	Application/Control No.	Applicant(s)/Patent under Reexamination	
	10/777,299	SHARE ET AL.	
	Examiner	Art Unit	
	MATTHEW J. DANIELS	1791	